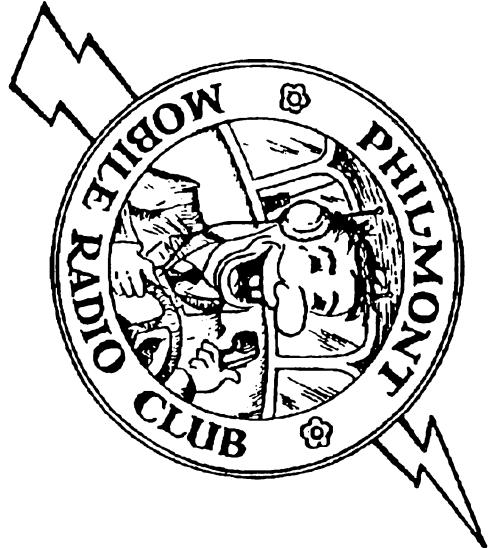


FIRST CLASS MAIL



# THE BLURB

*A Publication of*  
THE PHIL-MONT MOBILE RADIO CLUB, INC.  
2113 EDGEHILL DRIVE, FURLONG, PA 18925

PHILMONT MOBILE RADIO CLUB  
W3RQZ • W3TKQ • W3QV

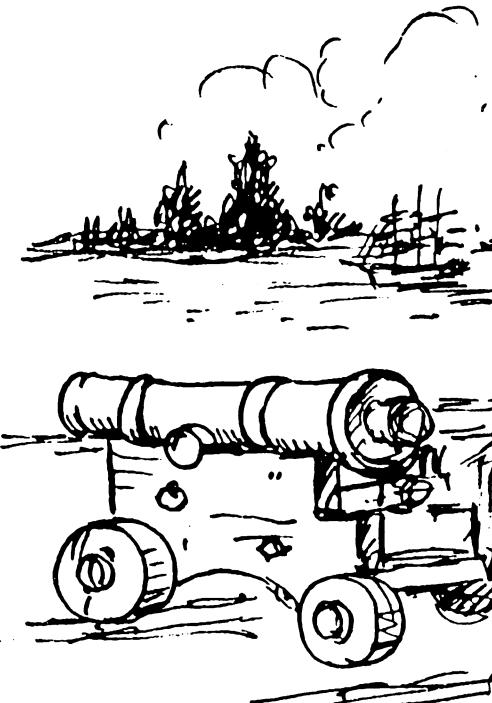


**BLURB**



3rd JULY 1990

*Season OPENS..  
AT FORT MIFFLIN  
July 1.*



is published monthly by, and for, the members of **The PHIL-MONT MOBILE RADIO CLUB, INC.** whose purpose is to promote Amateur Radio in general, and Mobile Radio in particular. Copying and quoting is permitted with a credit line. We gladly exchange publications with other amateur radio clubs; requests should be sent to the Editor. BLURB subscriptions are available to non-members for \$6.50 addressed to the Treasurer. The club meets at 8 PM on the first non-holiday Monday of every month at The Franklin Institute, 20th Street and the Benjamin Franklin Parkway, Philadelphia. Use the Winter Street (north side) entrance.

**ALL VISITORS ARE WELCOME!**

Amateur Radio License Examinations - every meeting night at 6:30 PM-SHARP!

**CLUB INFORMATION**

- 24 Hour Information Number at W3TKQ - **(215) 448-1139**  
 Repeater frequency: 147.03 MHz - Simplex frequency: 147.51 MHz  
 Mailing Address: P.O. Box 88, Abington, PA 19001

**STATIONS**

W3QV - 147.03 MHz. Repeater - 8200 Ridge Avenue, Philadelphia, PA - Trustee W3BBB  
 W3RQZ - 1176 Old York Road, Abington, PA - Trustee W3VVS  
 W3TKQ - The Franklin Institute, Philadelphia, PA - Trustee W3PWG

W3TKQ Operators: WA3AAL, Fred; N3ABS, John; K3TEF, Frank; KA3PJC, Jack; W3PWG, Rollie  
**ALL LICENSED AMATEURS ARE WELCOME TO OPERATE W3TKQ.**

**OFFICERS**

PRESIDENT: W3UY, Larry Clifford, 951 Surrey Drive, Blue Bell, PA 19422  
 VICE PRESIDENT: N3FVI, Bill Popovic, 343 Lemonite Street, Philadelphia, PA 19103  
 SECRETARY: N3GLH, Brad Swanson, 517 Cresheim Valley Road, Wyndmoor, PA 19118  
 TREASURER: KB3IV, Ed Masarsky, 15 Poe Avenue, Wyncote, PA 19095

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W3BBB (90); K3GBA (A); AK2I (91); W3IIM (A); W3IIN (A); K3KUD (91); W3LKI (90)

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Awards:	-----	MO-COM 5:	N3DHI	Special Events:	N3FVI
BLURB:	W3IIM	Net Control:	WB3CMM	TVI	WA3AUN
Budget /Audit:	W3IIN	Program:	N3FVI	VE Program:	ND3Q
Directory:	WB3KOJ	Publicity:	N3EAY	W3TKQ:	W3PWG
DX:	WA3AUN	Refreshments:	N3FVI	Welcome:	W3VVS

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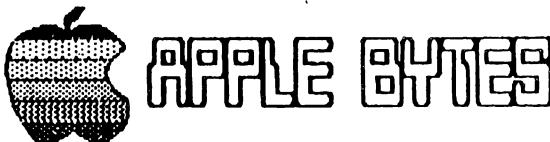
N3DHI, K3GBA, WB3KOJ

Assistant Editor/Typist: W3IIN

**DEADLINE:** To be assured of publication in the current month, all copy MUST be in the hands of the Editor at the Board of Directors' Meeting!

**NET SCHEDULE**

SUNDAY	09:30	147.030	MHz FM	"SUNDAY MORNING 2 METER NET"
	10:00	28.993	MHz SSB	"10-ON-10 NET"
	10:20	3.993	MHz SSB	75 METER NET
TUESDAY	20:00	147.030	MHz FM	CW PRACTICE NET (SEE CALENDAR)



Don Gordon, WB3KOJ

**JULY BIRTHDAYS**

- 02 Alice Popovic (XYL N3FVI)
- 04 Marion Blum (XYL N3AXJ)
- 06 Edna McVaugh (XYL W3LEM)
- 10 Natalie S. Gordon - WB3KOH
- Louis Rulli - WB2WOM
- 12 Grace Smith (XYL K3GBA)
- 14 William C. Clayton - K3HIE
- Lawrence J. Clifford - W3UY
- 20 Irwin Miller - K3KNH
- 23 Theresa Henderson (XYL KA3MHO)
- 24 Peggy Snyder (XYL W2HSA)
- 25 Virginia J. Haring - W3IIN
- 27 Helen Beamon (XYL W3BFM)
- 28 Frankie Gilpin (XYL W3SRU)
- 31 Stephen C. Hoch - KA3AMO

**HELP PHIL-MONT**

Are you planning to join ARRL or renew your current membership?  
 Help Phil-Mont by joining or renewing through the club.  
 Contact KB3IV for the details.

**NEW DIRECTORY**

Please delete the work phone number for **SAM KUNCEVICH**.

Any more errors or changes? Please let me know by July 10.

**CLUB INFORMATION**

24 Hour Information Number at W3TKQ  
**(215) 448-1139**

**MAINLINER'S ACTIVE**

W3AA

The 'Mainliner's Net' is now meeting at 9:30 AM on 14.1755 MHz USB. It is run informally with Dr. Carl (W3SGR) as the unofficial net control. W3UQ, N3WW and many others have been checking-in; how about you?

## C&gt;READ.ME

An editorial by Jack Haring, W3IIM

Have you ever noticed how scrupulous most hams are when it comes to doing everything 'according to the book', particularly when it comes to giving their call letters (sometimes ad nauseam)? And how upset we get when we come in contact with those of us who innocently, and sometimes purposely, ignore the 'rules'.

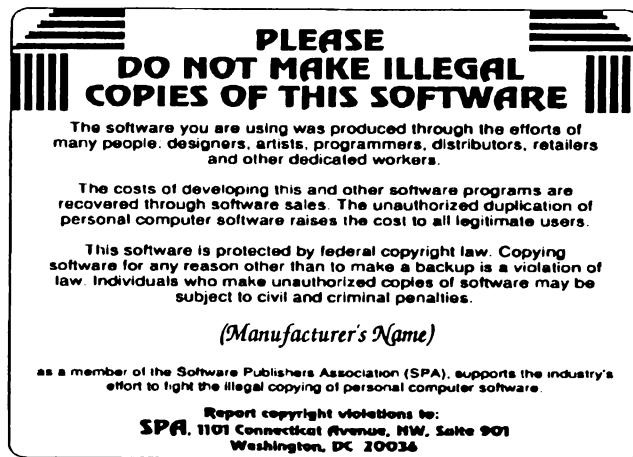
Phone calls are made as soon as someone slightly crosses the line of 'business use' of a frequency or of a phone patch. We get upset when we observe the slightest infraction of what we perceive as 'proper operating practices'.

I've commented earlier that I think we tend to keep this philosophy for many reasons, one of which is to set us apart from the 'CBers' of the world.

However, when it comes to computers, we totally ignore the fact that many of us regularly espouse, and engage in, illegal actions with total disregard of the fact that what we are offering or accepting constitutes a criminal act. I'm talking about our regular violation of the Copyright laws whenever we copy software for someone else's use.

Every program that we use has been written by someone who has the right to be compensated for his/her efforts. Even 'shareware' writers expect you to send them a 'donation' if you like their program and intend to use it. Have any of my readers EVER sent in such a donation? I congratulate you if you have. Your name belongs on a special honor roll of people who respect the intellectual property and hard work of others.

Most of the commercial software packages, that you purchase, include a sealed envelope containing the program diskettes. The printing thereon is a legal document which is often difficult to read, and, if read, seldom understood. This 'License Agreement' is usually only a license to USE the enclosed copy of the program, to which the software company retains 'title'. Each license agreement is different, but the basics are laid-out eloquently in the following notice.



If we like a program, and intend to use it for business or personal purposes, we should be willing to pay for it rather than steal it, because that's really what a Copyright violation is: Theft!

Next, we should talk about stealing from your employer when you stand in front of his photocopier while making a copy of the 200 page manual that accompanied your diskettes... but we'll have to save that for another editorial.

The bottom line is: if you intend to continue stealing from the software companies, then please don't be so stupid as to talk about it on the radio - our radio - HAM RADIO; use the eleven meter band for that kind of activity.

## The PREZ SEZ

Larry Clifford, W3UY

"All work and no play" is an old expression that sometimes is overworked in the wrong way. Likewise, all work and no play, in a club, is not too good for the working members either. But summertime is here, lots of outdoor activity will be filling out our days.

But, alas, net activities... They seem to suffer from the summer's heat, which apparently makes some shacks 'too hot to use.' Yes our net activities continue in the summertime. I suggest that all club members can make more profitable use of our nets. How many of our members just listen to any one of our nets but do not check in? Just listening to a list of call signs can be awful boring to say the least. Is it fun? Some people must think so. Granted it is not a crime not to check in, but the nets are a good place to, for example, get out an inquiry; look for something you need; hear other hams exchanging information which may even be of interest to you. A lot of questions are asked outside of nets i.e. directions to certain places.

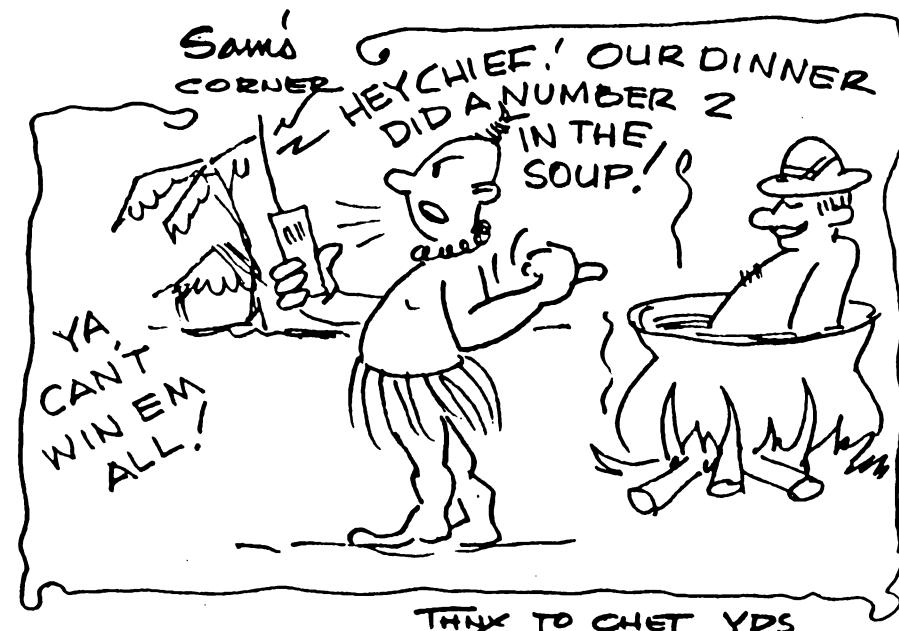
But my purpose is to have our mem-

bers, and our net guests, use our nets for inquires regarding members' needs. When you ask, on a net, you generally reach the largest audience that is on any of our frequencies at any given time.

Several years ago, I had trouble with my antenna rotor. I asked, on the Rooster Net, if anyone had a diagram of the rotor. That very same day I had a manual, on the rotor, in my home. Copies were made, the original returned to its owner, and the rotor was shortly back in service. Not bad for a thirty second commercial!

Nets exist not to keep the repeater or net control stations on the air, but to provide services to the club membership. If you need something, or some type of information, put it out on the net. You will probably get what you need, others will also start to ask and receive, and information, both technical and otherwise, will start to flow even more freely than it does today.

If our members make an effort and show a little interest in the nets, the first thing you know, our nets, once again, will become more interesting.



**\*UPDATE\***

JULY 2 General Meeting Program:  
**PUBLIC SERVICE**  
 Russ Stafford, WB3JVX

July 18 Directors' Meeting  
 at W3BBB's

July 21-22 PADDLERAMA

AUG 6 General Meeting

Aug 15 Directors' Meeting  
 at W3IIM & N's

SEPT 10 General Meeting

**HAM RADIO FLEA MARKET**

Every Saturday 09:00 to 16:00

Indoor Space Available

**COUNTRY SPRINGS MARKET**

Route 248, North of Allentown, PA

Info: 215-266-9291 or 767-5833

Talk-in: 146.745 146.52

**HAMFESTS**

JULY 29 TIMONIUM, MD  
 BRATS Hamfest & Computerfest

AUG 12 WARRINGTON, PA  
 Mid-Atlantic RC

AUG 19 GEORGETOWN, MD  
 Delmarva Hamfest

AUG 26 MULLICA HILL, NJ  
 Gloucester County ARC

SEPT 9 GAITHERSBURG, MD

SEPT 16 PENNSAUKEN, NJ  
 South Jersey RA

SEPT 22-23 YORK, PA

OCT 21 BENSALEM, PA  
 Penn Wireless Association

OCT 28 SELLERSVILLE, PA  
 RF Hill ARC

**V.E. TEST LOCATIONS**

from EPA FEEDLINE & others

Confirm all information, in advance, with the contact person. Licensed applicants must bring their original license and one photocopy of it. All applicants, including children, must present positive ID. Also bring the original of any Certificate of Successful Completion needed to prove current status. The ARRL VEC's 1990 test fee is \$4.95; there is no charge for a Novice test.

**BELLMAWR, NJ**  
 Monthly, 3rd Thursday  
 Bill Helmatag  
 (609) 546-7710

**CENTER CITY**  
 Monthly, 1st Monday  
 Dusty Rhoads, ND3Q  
 (215) 482-0386  
 (215) 879-0505

**PERKASIE**  
 Monthly, 3rd Monday  
 Warren Erdman K3ZXQ  
 (215) 679-5764

**BRYN MAWR**  
 Bob Haase, W3SA  
 (215) 293-1919

**LEVITTOWN**  
 July 5  
 Dave Heller, K3TX  
 (215) 946-1040

**HATBORO**  
 Tom Michaud, WA3TQJ  
 (215) 343-3494

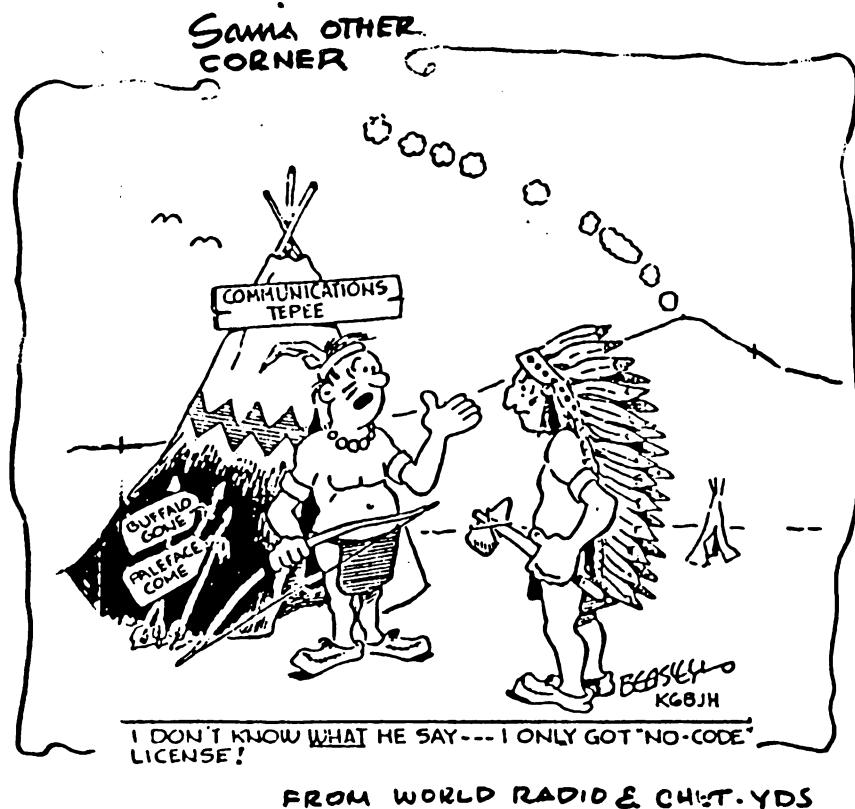
**THANKS** to the following who participated in the CORE STATES Race on Sunday, June 17.

Jack N3ALW; Steve KA3AMO; Charlie KA3EBC; Joann N3FTC, Susie N3FTY; Ted N3FTZ; Jerry N3GBM; Jim N3GEN; Paul N3GMH; Thom N3GXX; Ed KB3IV; Mike WB3JHX; George N2KSX; Gil W3SRU; Larry W3UY; Bill W3YHV; Bob W3YLT; Bob NS3Z.

One lost child was found OK, about five blocks away. Assorted info. requests were handled, and there was a lot of walk-in traffic at the Van. A good time was had by all!

Bill, N3FVI

Downloaded by Ted Lada, N3FTZ, from the 'ModemNews' board.



FROM WORLD RADIO & CHST. YDS

the appointments are, technically, those of the respective governors.

**FAMILY TRADITION:** There still is a father-to-son tradition in the profession, however. Ives ascribes that to the fact that having grown up in a pilot's family "is really the only way you can understand what it's like - having to go out whenever the call comes, regardless of what the ship is, what day it is, what time it is or what (weather) conditions are."

Among the new apprentices is the son of an active Delaware River pilot, a son of a retired pilot and two sons of pilots at other ports. All, however, must be graduates of a recognized maritime academy.

Training is a continuing part of a pilot's life. He receives formal instruction and is tested at least every two years. Once every five years he must requalify for the requisite federal license. The association now is completing a four-year project that saw all of its members go through a ship handling school at Grenoble, France, said to be recognized as the most prestigious in the profession.

That regimen is no more than what's necessary to be able "to take a big ship through tight places," Ives said. "It's a lot like surgery: it looks easy only if you haven't done it."

*tnx FOCUS magazine*

**Congratulations** to Steve White, WA3IAO, president of The Suburban Amateur Radio Club, on his being named **Amateur of the Year** at the ARRL's Atlantic Division Convention in Rochester, NY.

## 10 COMMANDMENTS FOR TECHNICIANS

1. Beware the lightning that lurketh in the undischarged capacitor, lest it cause thee to bounce upon thy buttocks in a most unmanly way.
2. Cause thou the switch that supplieth large quantities of juice to be opened and thusly tagged, that thy days in this earthly veil of tears be long.
3. Prove to thyself that all circuits that radiateth, and upon which thou work, are grounded and thusly tagged, lest they lifteth thee to radio frequency potential and causeth thee to percolate.
4. Tarry not amongst those fools that engage in intentional shocks. For they are non-believers and surely will be cast from the world of the living.
5. Take care that thou useth the proper method when thou taketh the measure of high voltage, lest thou incinerate both thyself and thy meter. For verily, though thee hast no account number, and can easily be surveyed; the test meter doth have it. And many days of woe will be visited upon the supply room.
6. Take care thou tampereth not with interlocks and safety devices, for this incurreth the wrath of the supervisor, and bringeth the fury of the safety inspector upon thy head for all to see.
7. Toil not on energized equipment, for if thou dost, thy fellow workers surely shall console thy widow in many ways.

## JUNE GENERAL MEETING

**Blurb** - Our eloquent editor had no report.

**Repeater Committee** - The UHF side of the repeater has an intermittent in it and was removed from service. It should be back online soon.

**W3TKQ** - The Drake is not working and needs repair.

The evening's program was cut short because of a VCR that was suffering from bad belts. W3IIN and W3IIM had dug out some fine videos including "Phil-Mont Does Dayton", however the show had to be postponed.

The meeting adjourned at 20:55.  
Respectfully submitted; Brad Swanson,  
N3GLH, Secretary



## MINUTES

## JUNE DIRECTORS' MEETING

The June Mid Month meeting was held at the home of Brad (N3GLH) and Vikye on June 13, 1990. Present were N3FVI, N3GLH, KB3IV, W3BBB, K3KUD, AK2I, W3IIN, W3IIM, N3DHI and W3AA. The meeting was called to order by N3FVI at 20:20 hours. KB3IV read the treasurer's report.

**New Business** - The thought of raising the membership dues was discussed at length. The board finally arrived at a figure of \$18.00 per year and it will be voted on at the July mid month. The current rate of \$14.00 has been in effect since 1981.

A new club simplex frequency is needed due to the interference on 147.510 MHz.

W3AA was given two frequencies to monitor for activity. The chosen frequency will be published in the Blurb.

The rebroadcast of East Link is being researched by N3DHI and others. If Phil-Mont is to take this project on, it would probably be aired before the Sunday morning 2mtr net.

**Repeater** - The repeater will be down on 6/20/90 for a few hours that night. W3BBB and N3GLH will be changing the cabinet and putting the UHF back on the air.

**Mo-Com** - The Abington Township Public Safety Committee has voted yes for the

purchase of Mo-Com. The vote now goes to the Abington Township Board of Commissioners for final approval.

W3TKQ - AK2I, the station representative, had several items on his agenda. His list of suggestions included what frequency the station should monitor during station hours and a recommended preamble. Jake also informed the board that he has sent letters of appeal to various equipment manufacturers including Icom and Kenwood. He hopes to spark some interest in our club station from these companies in hope that equipment will be donated.

The meeting adjourned at 22:31 and refreshments were enjoyed by all.

Respectfully Submitted; Brad Swanson, N3GLH, Secretary

## NEW MAGAZINE FOR VINTAGE FANS

Radio Bygones is a new bimonthly with news and features about historical aspects of radio, including amateur, military, commercial, maritime, etc. For information, contact Geoffrey C. Arnold, G3GSR, 8A Corfe View Road, Corfe Mullen, Wimborne, Dorset BH21 3LZ, England.

*tnx QST*

## AMATEUR LICENSE EXAMS HELD THE FIRST (non-holiday) MONDAY OF THE MONTH

At  
**THE FRANKLIN INSTITUTE**  
For Information Call ND3Q at  
**(215) 482-0386 or 879-0505**  
Accessible by the handicapped.

CALL:	N2KSX
NAME:	George Starks
HANDLE:	George
CLASS:	Technician
ADDRESS:	31 W. Sunset Drive Berlin, NJ 08009
HOME PHONE:	609-768-9553
OCCUPATION:	Mechanic
BUSINESS PHONE:	215-737-3948

## REPEATINGS

We've seen the last of the '2 by 1' calls. NZ3Z was the last. Now they'll start on the range AA3AA through AL3ZZ... Spencer can make a big deal out of a simple antenna tower lowering. It's a good thing it only dropped four feet - minor repairs to the antennas; major repair to the ego... Nice to hear Gil on the repeater - too bad it's only once a year... Brad's diskette drive overfloweth... Stimulating mid-month meetings lately - expect to see some interesting letters-to-the-editor shortly... The Clinton Rs (you know who) are a new grandfather and uncle respectively - congrats guys!

then to river is akin to an 18-wheeler coming off an expressway and onto a country lane heavy with Sunday drivers and assorted roadway hazards.

**TREACHEROUS VOYAGE:** Ives describes the Delaware River channel as considerably more narrow and treacherous than the layman might suspect. "You have to do it (almost) every day to get to know the river and what's in it," he said. He was an active pilot for 35 years before being elected head of the association last year, but he expects to return to that duty when his tenure is up.

Facing the dangers these days are larger vessels carrying heavier cargoes than in the past. For those ships, negotiating the tight

**Piloting doesn't compare to what it was a century ago when pilots based at the Delaware and New Jersey capes ventured miles out to sea in small rigs to be the first to reach an incoming ship--and get the job. That often nasty competition led to the formation of the pilots' association in 1896.**

turns is more difficult than it was for their predecessors.

"We bring a million barrels of oil up the river every single day," Ives said. "An infinitesimal amount of it has ever ended up in the water, but the goal is to have no spills at all." Petroleum is the principal commodity shipped on the Delaware.

Of the three most recent spills, spanning a period of more than a year, Ives maintained, two are attributable to other than navigational reasons and one resulted "from hitting a rock that no one ever knew was there." The others were officially blamed on a complete loss of power and a crew member's having accidentally released an anchor.

**ADVENTUROUS CHARACTERS:** There is an understandable perception of a pilot as an adventurous character. He's commonly

pictured climbing a rainswept Jacob's ladder from a tiny dispatch boat bobbing in rough waves. Something like that scene can still occur from time to time, but most rendezvous at the breakwater are less dramatic.

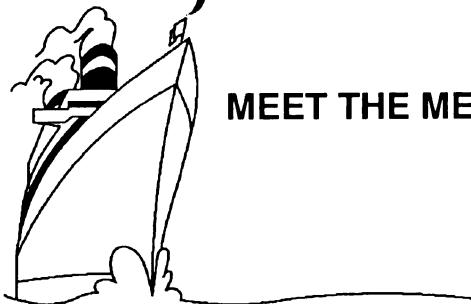
They certainly don't compare to a century ago when pilots based at the Delaware and New Jersey capes ventured miles out to sea in small sailing rigs to be the first to reach an incoming ship - and get the job. It was that often nasty competition that led to formation of the pilots' association in 1896.

Today, the men are dispatched in rotation to assignments requested by ship radio or prescheduled. They're still independent professionals, but the association collects

pilotage fees and passes on standard compensation. Ships are charged according to a formula based on length and breadth. The average fee is between \$2,000 and \$3,000. A pilot can make about \$100,000 a year, before expenses, Ives said.

So far, there are no women among the pilots on the Delaware, but Ives said there is "no reason why there can't be." There were some females, he said, among the more than 100 applicants to become pilot apprentices this year. Seven were accepted - three in Pennsylvania and four in Delaware - on the basis of extensive testing and interviews. They face eight years of training - four as apprentices and four as junior pilots working under the direct supervision of a veteran pilot - before they will be able to solo.

The association, Ives said, does not do the apprentice selecting. That's a function of state licensing agencies in each state and



## MEET THE MEMBER - Paul Ives, W3SMA

### PILOTING SHIPS UP THE DELAWARE

The 85 men of the Pilots' Association are a ship captain's best friends.

A cylindrical concrete watchtower stands 125 feet tall on a sandy bluff overlooking Cape Henlopen, where Delaware Bay meets the Atlantic Ocean. Narrow slits at its top still provide a panoramic view of the shore and ocean but the eyes that do the watching nowadays are the antennae which sprout from the structure.

"A hundred years ago, they used to watch for ships through brass telescopes. Now we do it with sophisticated radar computers and communications equipment," said Capt. Paul Lane Ives Jr., president of the Pilots' Association for the Bay & River Delaware.

The tower near Lewes, Delaware, which houses the southern anchor of the association's traffic monitoring system, originally was one of a chain of such structures erected along the Delaware and Maryland coastline in the early 1940s as observation posts for coast defense artillery. Their mission was to prevent penetration of the bay by hostile submarines or warships.

Not incidental to today's traffic monitoring and control function, Ives explained, is continued protection of the bay, the river that snakes north from it past Philadelphia into New York state, and the extensive shorelines in four states. The most likely enemy now is petroleum.

"The public doesn't want any oil in the water and neither do I," Ives said.

**SHIP GUIDES:** The association's protective responsibility might, at first glance,

seem incidental when compared to those of public agencies and the companies that own and handle the oil. But it is a real one. The 85 pilots who are members of the association, which has its headquarters in Philadelphia, are responsible for guiding the considerable volume of ships which ply the river and bay.

Licensed separately by Pennsylvania and Delaware - those who live in New Jersey hold Pennsylvania licenses under a long-standing arrangement - they are posted to the bridge of each vessel and give navigational orders while in the bay or river. They don't actually take command from the ship's master but, for all practical purposes, they're in charge of its movement.

Under U.S. maritime law, every foreign ship and every American ship in foreign trade is required to have a pilot aboard while in the Delaware or while approaching or leaving most every other port. As a practical matter, Ives said "it would be a brave, or a foolish, captain who would want to do without one."

Piloting is an art about as ancient as seafaring. The idea is that skippers who travel the high seas could not be expected to be familiar with all the nooks and crannies of the relatively tight waterways they use to begin or complete their voyages. Even the most detailed charts would not suffice to provide the knowledge and instincts necessary. In bad weather, that becomes even more crucial.

The transition from ocean to bay and

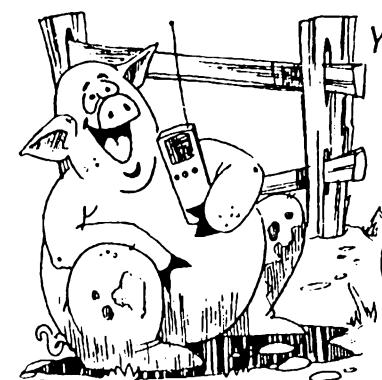
### 62nd MONTHLY VE SESSION STATISTICS JUNE

16 participants pass 21 elements  
4 new amateurs - 4 upgrades

Name	Call	From	To
David Bowden			Technician
Anthony Carlis	WA3IVO	Technician	Advanced
Jeff Depolo	N3HBZ	Technician	General
Lewis Hipkins		Novice	Technician
Jeffrey Smith			Technician
Eric Snyder			Novice
Robert Truesdale			Technician
Noel Zeibari		Novice	Technician

Congratulations to all, and to the members of our VE team:

ND3Q	Dusty Rhoads, Chairman
N3EKR	Lee Pamplin
N3FTZ	Ted Lada
N3GXK	Thom Burns
WA3TPH	John Carbonaro
NS3Z	Robert Forrester
KA2ZZA	Virginia Macrie



You Passed the Test...

*Congratulations*  
on Your New Ham License

TMX Sussex ARC

## FOUR ANTENNAS ARE BETTER THAN ONE

By Richard Doherty

Las Vegas, Nev. — Engineers from the Blaupunkt division of Bosch Telecom have applied phased-array steerable antenna technology to the age-old problem of achieving reliable, interference-free mobile automobile radio reception. Blaupunkt's new ADA (auto directional antenna) steered array is the first such use of a technology normally associated with military radar transceivers and radar beam steering.

ADA not only eliminates the need for an external aerial rod, but also allows the antenna reception pattern to be electronically steered in the direction of the strongest RF signal path.

Before development of the ADA antenna, mobile car receivers trying to boost reception capability while reducing interference, had to make use of single, large antenna sources or of dual antennas. But dual systems actually use a relay switch to direct the stronger of the two antenna signals to the receiver. No signal amplification

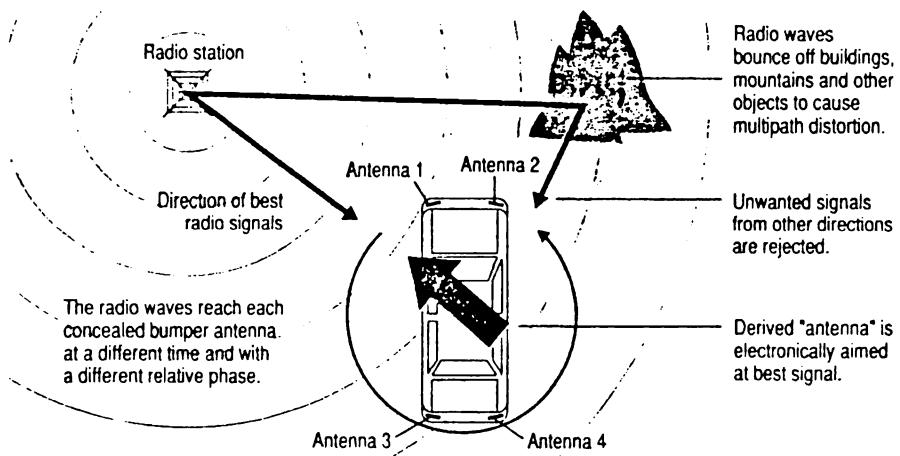
or multipath elimination is possible.

In contrast, ADA uses four simple foil antennas, mounted inside each of the car's bumpers. The four antenna elements are linked as a single array by Blaupunkt's realtime signal-processing system.

The key to the real-time, continuously variable, steering motion is a signal monitoring computer that analyzes the individual antenna levels, rotating the array in search of the best possible direction to steer the array. That method effectively eliminates multipath distortion, a problem with FM radio signals in metropolitan regions (buildings reflect out-of-phase signals to rod antennas, distorting the demodulated FM signal).

The rotation and steering of the ADA system are inaudible to the listener.

The combinational effect of the ADA system is to combine the signal-snaring abilities of all four antennas as if they were a single, larger antenna.



Radio waves reaching each concealed bumper antenna at a different time, and with different relative phases, are phase-array processed. The resultant "antenna" is then electronically aimed to seek the best signal and reject unwanted signals.

## AND YOU THINK YOU HAVE TROUBLES!

Ray Bilger, W3TDF

I'm writing this slow cause I know you can't read fast. We don't live where we did when you left. Your Dad read in the paper where most accidents happen within twenty miles of home so we moved. I won't be able to send you the address as the last family that lived here took the numbers with them for their next house so they wouldn't have to change their address.

This place has a washing machine. The first day I put four shirts in it, pulled the chain and haven't seen 'em since.

It only rained twice this week, three days the first time and four days the second time. The coat you wanted me to send you, your Aunt Sue said it would be too heavy to send in the mail with them heavy buttons, so we cut them off and put them in the pockets.

We got a bill from the funeral home, said if we didn't make the last payment on Grandma's funeral, up she comes.

About your father - he has a lovely new job. He has over 500 men under him. He is cutting grass at the cemetery.

About your sister - she had a baby this morning. I haven't found out whether it is a boy or a girl, so I don't know if you are an aunt or an uncle.

Your Uncle John fell in the whiskey vat. Some men tried to pull him out, but he fought them off playfully so he drowned. We cremated him. He burned for three days.

Three of your friends went off the bridge in a pickup. One was driving, the other two were in the back. The driver got out. He rolled the window down and swam to safety. The other two drowned. They couldn't get the tailgate down.

Not much more news this time, nothing much has happened. Write more often.

Love, Mom

P.S. Was going to send you some money but the envelope was already sealed.

tnx DLARC

## A PHIL-MONT'S MEDICAL DICTIONARY

Artery	.....	The study of fine paintings
Barium	.....	What you do when CPR fails
Benign	.....	What you are after you be eight
Cesarian Section	..	A district in Rome
Colic	.....	A sheep dog
Coma	.....	A punctuation mark
Congenital	.....	Friendly
Dilate	.....	To live longer
Fester	.....	Quicker
GI Series	.....	Baseball games between teams of soldiers
Grip	.....	A suitcase
Hangnail	.....	A coat hook
Medical Staff	.....	A doctor's cane
Minor Operation	..	Coal digging
Morbid	.....	A higher offer
Nitrate	.....	Lower than the day rate
Node	.....	Was aware of
Organic	.....	Church musician
Out Patient	.....	A person who has fainted
Post Operative	.....	A letter carrier
Protein	.....	In favor of young people
Secretion	.....	Hiding anything
Serology	.....	Study of English Knighthood
Tablet	.....	A small table
Tumor	.....	An extra pair
Urine	.....	Opposite of you're out
Varicose Veins	....	Veins which are very close together

tnx W3PST

[Retired editors get a little silly after a few years - Ed]

## COMPUTER CORNER

What is a **CACHE** and how does the system use it?

There are two types of **CACHE**: memory and disk.

A memory cache is a separate section of very high speed memory, with a cycle time of about 25 ns or so. This memory retains the most recently, and most frequently, used pieces of data that the processor requests. When the processor requests data from the main memory it will always search the cache memory first. If the data are found in the cache (called a "cache hit") it gets the segment immediately, incurring zero wait states. If the segment is not found, ("cache miss") the processor will then retrieve from the slower main

memory, possibly incurring wait states. In summary, memory cache is like a liaison between the system board and main memory, or *hardware cache*.

The second type of cache is disk cache, which is sometimes referred to as a *software cache* because it's set up through a software utility. A section of memory is set aside for the disk cache, and holds the most frequent and most recently used data from the disk drive. When the system needs to retrieve data from disk, it will first check the disk cache. If the data are found, it will retrieve it about 1000 times faster than an actual disk retrieval, which greatly improves overall system performance.

### High-Tech Sherlock Tracks Down the Beep

Computer crooks beware: Identifax Computer Recovery Bureau, Setauket, N.Y., is offering a security registry that helps police trace stolen personal and laptop computers.

The system uses software called COP (Computer Owner Protection), which lets the owner program a special identifying beep that sounds when the computer is turned on. When the police come across a machine they suspect is stolen, they can call Identifax, hold a phone next to the computer as it is turned on, and Identifax's central data bank will identify the beep and the computer's owner.

"We're hitting the education market first since they're the ones that get hit the most," says Warner Loeb, Identifax president. The company has already equipped the State University of New York at Stony Brook with COP and has a contract to register computers at John Jay College of Criminal Justice in New York.

*The WSJ*

### MORE CALL LETTERS!

The licensee of WA4UTY says that the present FCC regulations regarding operator (user) station identification are inadequate to protect the license of a system (repeater) trustee, and is petitioning the FCC for more stringent rules. He notes that with the present rules a repeater user remains legally unidentified to the control operator for up to a 10 minute period, during which the control operator has been repeatedly held responsible for the unidentified user's transmissions, which are being retransmitted through a system for which the control operator is responsible.

WA4UTY asks the FCC to revise its Part 97 rules to require mandatory identification by all users of a repeater at: "The inception of a communication where the Amateur's signal is being retransmitted by a station in repeater service." Thus far, no action has been taken by the FCC on the request.

*Inx WORLD RADIO*

When the four separate antennas receive a signal from a distant transmitter, their simultaneous outputs vary in signal level because they are physically located at different points of the impinging radio wave. When one antenna senses a peak positive signal, another antenna may be receiving a negative signal at that moment.

The usual result would be that, when added together, those signals would cancel each other out. But by electronically manipulating the phase of the signals from the each of the four antennas so that all are in phase with each other, the individual signals can be combined in an additive fashion.

The technique only works with signals approaching the array from a single direction: toward the signal source. Reflected signals, usually representing potential multi-path interference, tend to cancel themselves out. Whenever the real-time signal monitoring processor detects distortion, the array is rotated slightly until the interference is minimized or eliminated.

The ADA array comprises four antennas and a single ADA tuner system fed by four antenna connectors, four complete RF sections, a local oscillator, a signal monitoring computer and a summing network.

*Inx Electronic Engineering Times & The HETERODYNE*

### RADIO HAM PICKS UP DISTRESS SIGNAL

LONDON, Jan 20 - A U.S. radio ham picked up a yacht's mayday distress signal more than 3,000 miles away, touching off a search for 10 people drifting on a dingy in the Atlantic off Western Europe.

Mike Pagan, an amateur radio operator in New Jersey, told Britain's Sky television the captain of the Spanish-registered boat Armin Rose, radioed for help from the dinghy near the bay of Biscay.

*Inx anonymous*

## TELEVISION FOR THE BLIND

That's exactly what Boston's WGBH-TV has developed, making use of a little-used slice of the broadcast spectrum that can be picked up as a separate audio channel by most new TV sets.

Using this idle channel, known as a subcarrier, WGBH provides short narrative descriptions of key visual elements of a program during pauses in the dialogue. "Now they're kissing, as the sun sets over the ocean," the vision-impaired audience might be told.

The free service, available on a variety of programs, is carried by 35 Public Broadcasting Service stations. It reflects renewed interest in the so-called separate-audio channel, which was designated by federal regulators to carry alternate audio and data. Most stereo TVs and videocassette recorders are equipped to pick up the channel. Older sets can be inexpensively converted to get the signal with a decoder.

For now, only a few stations are experimenting with subcarriers, which also can carry computer data. New York's WNET-TV is working on Spanish translations for some national news programming; a Los Angeles TV station already offers local newscasts in both English and Spanish. Maryland Public Television uses subcarriers to transmit educational software and data to schools for classroom use.

The Electronic Industries Association says that "stations are getting quite creative" with the subcarrier technology. The association notes that some stations use it to provide extra commentary during sports events, while others use the channel to carry uncut soundtracks of R-rated movies.

*Inx Wall Street Journal*

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SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<b>1</b> 2M NCS AK2I 10M NCS ANYONE 75M NCS W3PWG	<b>2</b> GENERAL MEETING & LICENSE EXAMS	<b>3</b> CODE PRACTICE NET <i>as available throughout the summer</i>	<b>4</b> <i>Dog days begin</i>  <i>Independence Day</i>	<b>5</b>	<b>6</b>	<b>7</b>
<b>8</b> 2M NCS N3FTY 10M NCS ANYONE 75M NCS W3AOA	<b>9</b>	<b>10</b> CODE PRACTICE NET <i>as available throughout the summer</i>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>
<b>15</b> 2M NCS <b>NEEDED</b> 10M NCS ANYONE 75M NCS W3RCE	<b>16</b>	<b>17</b> CODE PRACTICE NET <i>as available throughout the summer</i>	<b>18</b> DIRECTORS' MEETING at W3BBB's	<b>19</b>	<b>20</b> <i>1st Man on Moon Apollo 11 - 1969</i>	<b>21</b>  <b>PADDLERAMA</b>
<b>22</b> 2M NCS NS3Y 10M NCS ANYONE 75M NCS AK2I  <b>PADDLERAMA</b>	<b>23</b>	<b>24</b> CODE PRACTICE NET <i>as available throughout the summer</i>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>  <i>World War I 1914</i>
<b>29</b> 2M NCS <b>NEEDED</b> 10M NCS ANYONE 75M NCS W3HFY  <b>BRATS' Hamfest</b>	<b>30</b>	<b>31</b> CODE PRACTICE NET <i>as available throughout the summer</i>		